



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/479,304	01/06/2000	GEOFFREY B. RHOADS	60085	2884

23735 7590 04/22/2005

DIGIMARC CORPORATION
9405 SW GEMINI DRIVE
BEAVERTON, OR 97008

EXAMINER

PICH, PONNOREAY

ART UNIT	PAPER NUMBER
----------	--------------

2135

DATE MAILED: 04/22/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/479,304

Applicant(s)

RHOADS, GEOFFREY B.

Examiner

Ponnoreay Pich

Art Unit

2135

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 November 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

45

DETAILED ACTION

The Appeal Brief filed on 11/25/04 was carefully reviewed by an Appeal Conference. The conferees have considered the applicant's arguments on 1) a phone permits two-way communication and 2) a cell phone, which Greenberg does not explicitly teach. Thus, the conferees agreed with the applicant's arguments and withdrew the finality of the office action dated 6/4/04.

In view of the Appeal Brief filed on 11/25/2004, PROSECUTION IS HEREBY REOPENED. A new ground of rejection is set forth below.

To avoid abandonment of the application, appellant must exercise one of the following two options:

- (1) file a reply under 37 CFR 1.111 (if this Office action is non-final) or a reply under 37 CFR 1.113 (if this Office action is final); or,
- (2) request reinstatement of the appeal.

If reinstatement of the appeal is requested, such request must be accompanied by a supplemental appeal brief, but no new amendments, affidavits (37 CFR 1.130, 1.131 or 1.132) or other evidence are permitted. See 37 CFR 1.193(b)(2).

Docketing

Please note that the application has been redocketed to a different examiner. Please refer all future communications regarding this application to the examiner of record, using the information supplied in the final section of the office action.

Claim Rejections - 35 USC § 103

Claims 1-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ariyavisitakul et al (US 5,084,891), herein referred to as Ari, in view of Hembrooke (US 3,004,104).

Claim 1:

Ari discloses a cell phone (Fig 8 and col 14, lines 14-17) including a data capture system (col 25, lines 55-60 and Fig 8, item 360) and a radiant-energy digital data transmission system (Fig 8, item 399 and col 27, lines 30-46), characterized in that the cell phone further includes an encoder (Fig 8, item 870) that encodes data captured by the data capture system prior to its transmission by the data transmission system (col 27, lines 37-46).

Note that although Ari does not explicitly state that the cell phone disclosed by him uses digital data transmission, because Ari discloses that the cell phone uses TDMA, it must be capable of digital transmission. It would have been obvious to one of ordinary skill at the time the applicant's invention was made to have made the radiant-energy transmission system transmit digital data. One of ordinary skill would have been motivated to do so as digital data usually comes in clearer on a telephone system than analog signals.

Ari does not disclose the cell phone further includes a steganographic encoder that hides a plural-bit auxiliary code within the data captured by the data capture system. However, Hembrooke discloses that at the time the applicant's invention was made, it was known in the art of signal processing altering a signal slightly so that the change is imperceptible to a human listener, wherein the alteration of the signal is for

the purpose of identify the origin of the signal (col 1, lines 10-13 and 29-59). This disclosure reads on the use of steganography with signals and an encoder must exist to encode the signal using steganography.

It would have been obvious to one of ordinary skill in the art at the time the applicant's invention was made to have modified Ari's cell phone using Hembrooke's teachings according to the limitations recited in claim 1. One of ordinary skill would have been motivated to do so as Hembrooke's teachings allow for the identification of a signal's origin (col 2, lines 68-70). Note that both Ari and Hembrooke's teachings both belong to the field of signal processing.

Claim 2:

Ari and Hembrooke disclose all the limitations of claim 1. In addition, Ari discloses the data capture system captures audio and includes a microphone (col 25, lines 55-60; col 27, lines 33-37; and Fig 8, item 855).

Claim 3:

Ari and Hembrooke disclose all the limitations of claim 1. In addition, Ari discloses that the cell phone encodes substantially all of the data transmitted by the cell phone (col 27, lines 30-46). Ari does not explicitly disclose the encoding being done transparently to a user of the cell phone. However, as conversation on a cell phone happen in real time, the encoding must be done transparently to a user of a cell phone as the user does not notice a delay due to the encoding.

Ari also does not disclose encoding done by a **steganographic** encoder and substantially all of the data transmitted by the cell phone is **steganographically**

encoded. However, Hembrooke discloses imperceptibly altering a signal for so that the origin of the signal could be identified (col 1, lines 10-30 and col 2, lines 8-15 and 68-70), which reads on steganographic encoding and the use of a steganographic encoder. Note also that Hembrooke discloses that the output from the encoding could be broadcast concurrently (col 2, lines 64-67). This reads on real time steganographic encoding, so the encoding would be transparent to a user. It would have been obvious to one of ordinary skill in the art to have further modified the combination cell phone of Ari and Hembrooke according to the limitations recited in claim 3. One of ordinary skill would have been motivated to do so for the same reasons given in claim 1.

Claim 4:

Ari discloses a method of operating a cell phone, comprising:

1. Receiving input information (col 27, lines 30-46).
2. Encoding the input information (col 27, lines 30-46 and Fig 8, item 870).
3. Transmitting the encoded information by wireless (col 27, lines 30-46 and Fig 8, items 890 and 898).

Ari does not explicitly disclose the transmission being done in a digital format. However, as discussed in claim 1, as Ari discloses the cell phone uses TDMA, it is capable of transmitting in a digital format. It would have been obvious to one of ordinary skill in the art to have said transmitting by wireless done for the same reason and motivation given in claim 1.

Ari also does not disclose:

1. **Steganographically** encoding the input information **to hide a plural-bit auxiliary code therein**.
2. Transmitting the **steganographically-encoded** information.

However, Hembrooke discloses that at the time the applicant's invention was made, it was known in the art of signal processing altering a signal slightly so that the change is imperceptible to a human listener, wherein the alteration of the signal is for the purpose of identify the origin of the signal (col 1, lines 10-13 and 29-59). This disclosure reads on steganographic encoding.

In light of Hembrooke's teachings it would have been obvious to one of ordinary skill in the art at the time the applicant's invention was made to have modified Ari's method according to the limitations recited in claim 4. One of ordinary skill would have been motivated to do for the same reasons given in claim 1.

Claim 5:

Ari and Hembrook disclose all the limitations of claim 4. Further, Ari discloses:

1. Receiving the input information in a non-digital form (col 27, lines 30-46).
2. Expressing the received information in digital form (col 27, lines 30-46 and Fig 8, items 865 and 870).
3. Encoding the digital form of the input information (col 27, lines 30-46 and Fig 8, item 870).

Claim 6:

Ari and Hembrook disclose all the limitations of claim 5. Ari further discloses the input information is audio information (col 27, lines 30-46).

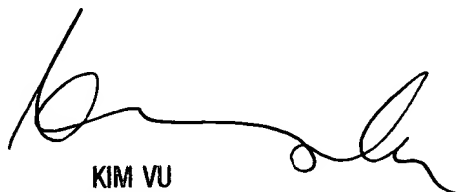
Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ponnoreay Pich whose telephone number is 571-272-7962. The examiner can normally be reached on 8:00am-4:30pm Mon-Fri.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kim Vu can be reached on 571-272-3859. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

PP


KIM VU
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100